

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Arguments & Remarks

Reconsideration, re-examination and allowance are respectfully requested.

Status of Claims

1. In the prior prosecution Claims 1-37 had been submitted and Claims 2, 4, 17-19 and 29 were previously cancelled. In the FINAL Office Action dated 09/05/2008 (hereinafter "Office Action"), Claims 1, 3, 5-16, 20-28, and 30-37 were pending, and were rejected. In the Amendment set forth above, Claims 1, 6, 7, 10, 16, 27, 28, 33, and 34 are amended; in addition to previously cancelled Claims 2, 4, 17-19, and 29, Claims 30 and 32 are cancelled; Claims 3, 5, 8, 9, 14, 15, 20-22, 25, and 31 are Previously Presented; and the remaining Claims 11-13, 23, 24, 26, and 35-37 are Original. The amendments presented herein are illustrated in the drawings and are described in the specification; and no new matter has been added. Amendments to a number of Claims have been made to more clearly and distinctly define the invention, and not in response to any findings of the Examiner or any cited art. In view of the amendments to the Claims and the Arguments and Remarks set forth below, reconsideration and re-examination are respectfully requested, and it is submitted that all Claims are in condition for Allowance.

In view of the amendments to the Claims and the Remarks and Arguments set forth below, it is respectfully submitted that all of the Claims are currently in condition for allowance, and a Notice of Allowance is respectfully requested.

Response to Arguments

2. Claims 1, 3, 5-16, and 20-27 are subject to new grounds of rejection.
3. Arguments regarding Claims 27-28 and 30-37 have been deemed unpersuasive. The Examiner's observations will be discussed below in conjunction with the consideration of the rejection of these Claims.

Claim Rejections – 35 USC § 112

4. The provisions of 35 USC 112, second paragraph, are duly noted.
5. The rejection of Claims 1, 3, and 5-8 under 35 USC 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which Applicants consider to be their invention is respectfully traversed.

Claim 1.

As to Claim 1 two areas of concern as to indefiniteness have been raised.

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Batallie, Group Art Unit 2186
RCE and Office Action Response

In the first instance, an issue was raised concerning the clause "each responsive", in line 3, raising the sufficiency of antecedent basis. The question raised is whether "each" references "a requester input and a requester output" or "a plurality of cache memories". The question is really not understood. The clause under consideration states a relationship between a "requester input" and a "requester output" and the "cache system". The clause has no reference to the "plurality of cache memories", as such, claimed to be included in the "cache system" in the previous clause. There is no apparent English-language linguistic interpretation that would read the "each" as having anything to do with the "plurality of cache memories".

It is well-known that linguistic interpretation of a listing of items, elements, components, ideas, or the like, followed by a comma and then the word "each" followed by a function or other description, is interpreted such that the function or other interpretation is applied each of items, elements, components, ideas, or the like, that precede the comma. Accordingly, it submitted that it is clear that the reference to "each" after the comma, reflects the further limitation language applied back to "a requester input and a requester output", the clause appearing before the comma.

Even though the "each" clause was clear and definite as presented, in an effort to cooperatively move the prosecution forward, Claim 1 has been amended herein to even more clearly and definitely express the provisions of that clause. Claim 1 as presently presented is clear and definite within the requirements of 35 USC 112, second paragraph and this rejection should be withdrawn.

A second concern has been raised regarding the requisite clarity in the use of the terms "selected ones of the plurality of requesters" and "requester". The term "requester" is found in general terms in the specification at page 4, starting at line 8, where it states –

"In one embodiment, the cache is coupled to a main memory. The cache is further coupled to one or more requesters such as instruction processors. Data may be retrieved from the main memory and stored in the cache for use by the requesters." (Emphasis added)

At page 5, at line 9, it states

"In yet another embodiment of the invention, at least one of control indicators identifies one or more of the requesters." (Emphasis added)

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

and at line 13, it states

“....data retrieved from the main memory may be updated by a requester.
(Emphasis added)

and at line 19, it states

“....multiple requesters each implement a snoop protocol on a shared bus that is coupled to the cache.” (Emphasis added)

The foregoing summary-type sample representations are described in detail in the specification with respect to block diagram representations in Figure 1 and Figure 2, and in flow diagram presentation with respect at least to Figure 3. It is submitted that the descriptive terminology “requesters”, “one or more of the requesters”, and “multiple requesters”, along with the functional descriptions, renders it clear the claim terminology “plurality of requesters” is fully supported and clear. It is further submitted that claim terminology “selected ones of plurality of requesters” provides clear, definite, and concise antecedent basis for later references to “a requester” when used in the same claim sequence context.

Having shown that there may be “selected ones of a plurality of requesters”, it appears to be clear that there can be an individual “requester” and that such terminology would clearly be understood to be one of the “requesters” within the “selected ones of the plurality of requesters”.

Claim 6.

Despite the foregoing, in a spirit of cooperation to move the prosecution forward, Claims 6 is amended herein to reflect the exact antecedent basis as “one of the plurality of requesters”; and it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim 7.

Claim 7 is amended herein to reflect the exact antecedent terminology as reference with regard to Claim 6; and, on this basis, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

The further rejection of Claim 7, as including insufficient antecedent basis for the limitation "the at least one requester" is duly noted, and this deficiency has been corrected by amendment herein. As amended, this limitation now reflects the proper antecedent reference; and, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim 16.

The finding that the limitation "the either or both the determining steps" lacks proper antecedent basis correct in that "the" is a typographical error and should not have been included. The Examiner's recommended modification of "at least one or both" has been adopted as a correction herein. As amended, this limitation now reflects the proper antecedent reference; and, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim 3.

Claim 3 depends from Claim 1, and with the amendments to Claim 1, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim 5.

Claim 5 depends from Claim 1, and with the amendments to Claim 1, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim 8.

Claim 8 depends from Claim 1, and with the amendments to Claim 1, it too is clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claims 9-15.

The basis for the rejection of Claims 9-15 as "further incorporating the features of the respective base claims" is not understood. Claim 9 is an independent claim that includes a limitation of "at least one requester". This limitation is clear, concise, and definite. It has a separate scope from the limitations in Claim 1. It is submitted that there

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

is no incorporation of terminology discussed with respect to Claim 1, and that no clarification is required.

Claims 10-15 depend directly or indirectly from Claim 9, respectively, and there is no incorporation of terminology discussed with respect to Claim 1, and that no clarification is required. Claims 9-15 are clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

In summary, Claims 1, 3, 5-8, and 9-15 are clear and definite within the requirements of 35 USC 112, second paragraph, and this rejection should be withdrawn.

Claim Rejections 35 USC § 102

6. The provisions of 35 USC 102(b) are duly noted.
7. The rejection of Claims 27-28, 31-32 and 35-37 under 35 USC §102(b) as being anticipated by U.S. Pat. No. 5,644,753 to Ebrahim, et al. ("Ebrahim") is respectfully traversed.

The Examiner's summarization of the teaching of Ebrahim has been considered in conjunction with these rejected Claims.

Before addressing Claim 27, the status of the other rejected Claims will be summarized.

Claim 28, as presently presented, is amended to include the limitations of dependent Claim 30, which is indicated to include patentable subject matter. (see Paragraph 8 below). As such this rejection of Claim 28 should be withdrawn, and Claim 28 is allowable as presently presented.

Claim 31 depends from Claim 28, which is allowable; and, accordingly, this rejection of Claim 31 should be withdrawn; and Claim 31 is allowable as presently presented.

Claim 32 previously depended from Claim 28 and Claim 31 depended from Claim 33. Claim 33 was indicated as including patentable subject matter. (See Paragraph 8 below). The limitations of Claim 28 and Claim 31 are written in combined form with the limitations of dependent Claim 33 in new independent Claim 33; and, accordingly, this rejection of Claim 33 should be withdrawn; and Claim 33 is allowable as presently presented.

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

Claim 35 depends from Claim 28, as presently presented; and, accordingly, this rejection of Claim 35 should be withdrawn; and Claim 35 is allowable as presently presented.

Claims 36 depends from Claim 28 and Claim 37 depends from Claim 36. Since Claim 28, as presently presented, is allowable, Claims 36 and 37 are also allowable; and this rejection of Claim 36 and 37 should be withdrawn.

In summary then, only Claim 27 remains in consideration regarding this rejection. The method of independent Claim 27 has not been specifically examined with respect to Ebrahim, that is, the teaching of Ebrahim has not been specifically applied to the method of Claim 27.

Ebrahim is an example of the prior art systems described by Applicants, wherein the various features and functionalities are designed and fixed in the system, as opposed to the system claimed by Applicants, wherein the functionality and responses may be programmably modified to meet various system requirements, requirements of different software solutions using the system, reconfigurations of hardware, and the like, all with the benefit of enhancing performance in the various situations.

The referenced drawings and descriptive material of Ebrahim do describe the storage of cache tags (Etag) and the storage of duplicate cache tags (Dtag), but there is no teaching of a "programmable" storage device. There is no need for a "programmable" storage device in Ebrahim because the function is designed into the structure. In contradistinction, Applicants describe and claim a system that has programmable characteristics.

Ebrahim does not teach or suggest that a programmable storage device can be utilized for storage of indicators, nor that the indicators can be programmably altered. Further, Ebrahim does not appear to teach or suggest the use of a selectively actuatable mode switch to re-program one or more of the programmable indicators.

For the reasons set out herein Ebrahim neither teaches nor suggests a method of controlling a programmable memory system by automatically re-programming any of the control indicators based on monitored conditions, nor does it teach or suggest responding

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

to a selectively actuatable mode switch; and, accordingly, this rejection of Claim 27 should be withdrawn since Claim 27 is allowable as presently presented.

Allowable Subject Matter

8. Claims 30 and 33-34 are objected to being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

As previously presented, Claim 30 depended from Claim 28. By amendment herein Claim 28 and Claim 30 have been combined as amended Claim 28, and Claim 28 is allowable as presently advised.

Claim 31 depends from amended Claim 28, and Claim 31 is allowable as presently presented.

Claim 32 originally depended from Claim 28, and Claim 33 originally depended from Claim 32. With the indication of allowability of Claim 33, if rewritten, Claim 33 is rewritten in independent form to include the limitations of Claims 28 and 32, and new independent Claim 33 is allowable as presently advised.

Claim 34 previously was dependent from Claim 32, and Claim 32 has been amended herein to be dependent from Claim 33, and Claim 34 is allowable as presently presented.

Claims 35 and 36 each depend from Claim 28, wherein Claim 28 is allowable as amended herein, and Claims 35 and 36 are allowable as presently presented.

Claim 37 depends from Claim 36, and Claim 37 is allowable as presently presented.

9. The indication of allowability of subject matter in Claims 16 and 20-26 if rewritten or amended to overcome the rejection(s) under 35 USC 112, 2nd paragraph, is acknowledged. Although the Office Action did not provide any specific rejection of Claims 16 and 20-27 under 35 USC 112, 2nd paragraph, in paragraph 5 of the Office Action, the noted antecedent issue on page 4 of the Office Action relating to Claim 16 has been addressed, and correction made herein.

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

In summary, then, Claims 16 and 20-26 are allowable as presently advised; and, since Claim 27 is independent and not related by reference to Claim 16, it is treated separately herein.

Applicants' representative appreciatively acknowledges these indications of allowable subject matter.

Serial No. 10/620,406
Docket No. RA-5623K
December 5, 2008

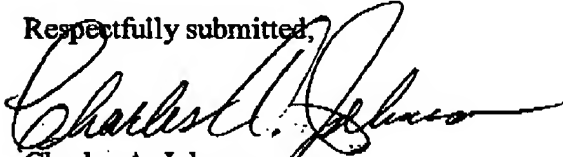
Examiner Pierre Bataille, Group Art Unit 2186
RCE and Office Action Response

Conclusion

In the prior prosecution Claims 1-37 had been submitted and Claims 2, 4, 17-19 and 29 were previously cancelled. Claims 1, 3, 5-16, 20-28, and 30-37 were pending, and were rejected. Allowable subject matter was noted for Claims 16, 20-26, 30, and 33-34. In the Amendment set forth above, (a) Claims 1, 6, 7, 10, 16, 27, 28, 33, and 34 are amended; (b) in addition to previously cancelled Claims 2, 4, 17-19, and 29, Claims 30 and 32 are Cancelled herein; (c) Claims 3, 5, 8, 9, 14, 15, 20-22, 25, and 31 are Previously Presented; and (d) the remaining Claims 11-13, 23, 24, 26, and 35-37 are Original. In view of the amendments made and arguments presented, it is submitted that all pending Claims are in condition for allowance, and a Notice of Allowance is respectfully requested.

If the Examiner has any questions regarding the subject Application or this response, a call to the undersigned is encouraged and welcomed.

Respectfully submitted,



Charles A. Johnson
Attorney for Applicants
Reg. No. 20,852
Telephone No. (651) 635-7702